Options for Project Selection Criteria (PSC) on Safety projects

B.1 Surface Transportation Program (STP)
B.1.2 Safety Projects

Safety improvement project examples:

1. Intersection Safety
2. Pedestrian Safety
3. Bicycle Safety
4. Safe Routes To School
5. Road Departure Safety
6. Geometric Design
7. Nighttime Visibility
8. Highway-Railroad Grade Crossing

1. Intersection Safety

Driving near and through intersections is one of the most complex challenges that drivers face. Intersection crashes account for more than 45 percent of all reported crashes, and 21 percent of fatalities. We can reduce fatalities and injuries from intersection crashes through careful use of good road design, traffic engineering, comprehensive traffic safety laws and regulations, consistent enforcement efforts, and sustained education of drivers and pedestrians.

2. Pedestrian Safety

Since walking is a mode of transportation, it needs to be promoted in every community. It is no longer acceptable that nearly 5,000 pedestrians are killed in traffic accidents every year, that people with disabilities cannot travel without encountering barriers, and that a desirable and efficient mode of travel has been made difficult and uncomfortable. A Pedestrian safety project can be a stand-alone project or it can be a component of a road/intersection widening/improvement or a bicycle path or a bridge-widening project.

3. Bicycle Safety

The need for safe, convenient, and attractive facilities to encourage safe bicycling are essential to any community. A bicycle safety project can be a separate project or it can be a component of a road/intersection widening/improvement project or a bridge-widening project.

4. Safe Routes To School

Today fewer than 15 percent of all school trips are made by walking or bicycling and it is declining over time, one-quarter are made on a school bus, and over half of all children arrive at school in private automobiles.[2] The decline in walking and bicycling has had an adverse effect on traffic congestion and air quality around schools, as well as pedestrian and bicycle safety. [4] The purpose of the federal Safe Routes to School (SRTS) program is to address these issues head on. The program makes funding available for a wide variety of projects, from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle to school.

5. Road Departure Safety

In road departure safety projects priority should be given to keep drivers on the road. This can done in part by giving drivers the information they need to safely control their vehicles. Projects could include retro reflective signs and pavement markings that help the drivers stay in the proper lane; rumble strips can alert a distracted or drowsy driver when they start to drift.

If a driver veers off the roadway, every effort should be made to make sure that a severe crash does not occur. Wide shoulders and flat traversable roadsides will let the driver recover, and safely return the vehicle to the roadway. Properly designed breakaway sign and light supports, roadside barriers, and bridge railings will help keep motorists from encountering greater harm. Median barriers can help prevent high-speed head-on collisions.

The following are some sample projects that may help ensure the safety of context-sensitive solutions that provide a driving, riding, and walking environment that incorporates community values into street and road design.

- Roadside hardware
- Utilities and roadside safety
- Work zone safety
- Pavement edge drop-offs
- Rumble strips (shoulder, centerline)
- Barrier terminals/crash cushions
- Bridge railings
- Breakaway hardware
- Work zone devices

6. Geometric Design

Highway, vehicle, and individual users are the three integral parts of transportation safety and efficiency. Geometric design improvement projects that improve safety performance of a facility may be considered in this category.

7. Nighttime Visibility

Retro reflectivity is the scientific term that describes the ability of a surface to return light back to its source. Retro reflective signs and pavement markings bounce light from vehicle headlights back toward the vehicle and the driver's eyes. Signs and markings that efficiently return the light appear brighter and easier to see and read.

Retro reflectivity, or nighttime visibility of signs and pavement markings provide: (1) critical information to drivers at night; (2) help drivers navigate the road during nighttime hours, enhance traffic flow and driver mobility; and (3) promote safe driving. (Example projects: Nighttime Visibility of Signs; Longitudinal Barriers, including some Bridge Rails, Bridge Rail Transitions, and Guardrail Offset Blocks).

8. Highway-Railroad Grade Crossing

The number of railroad grade crossing fatalities, injuries, and crashes are small in comparison to other automotive related accidents, but these accidents have the potential of catastrophic consequences.

- In 2003, accidents at public highway-rail crossings in the United States resulted in 295 deaths and 893 injuries.
- In 2003, 502 people were killed and 394 were injured while trespassing on railroad rights-of-way and property.
- The United States has approximately 150,000 public grade crossings; of these crossings, approximately 35,500 have gates, 25,000 have flashing lights, and 1,200 have highway traffic signals, wigwags, and bells.

The WAMPO Railroad Crossing Plan (RRCP) will identify evaluate railroad crossings within the WAMPO Planning Area from the safety point of view. The Plan will also suggest Project Selection Criteria, which can be used to rank railroad crossing projects within the safety category

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http://safety.fhwa.dot.gov/saferoutes/#s1

[1]"Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July 1972.
[2]"Data from the 2001 National Household Travel Survey conducted by Federal Highway Administration were used as the source."
[3]"Physical activity and the health of young people," U.S. Centers for Disease Control & Prevention, Fact Sheet, 2004.
[4]"Barriers to Children Walking and Biking to School," CDC, 2005.

Types of Safety Project	**Points: Intersection Safety**
• Intersection Safety • Pedestrian Safety • Bicycle Safety • Safe Routes To School • Road Departure Safety • Geometric Design • Nighttime Visibility • Highway-Railroad Grade Crossing • Signalization Project • Bridge Safety Improvement • Pavement Resurfacing and/or safety Marking • ITS projects Improving Safety • Motorist Safety Improvements	0-10 Current Entering Traffic 0-20 Sum of Critical Movements (Peak hour) 0-15 EPDO Rate 0-10 Roadway Functional Classification 0-20 Other Considerations 0-15 Cost Effectiveness 0-10 Existing Pavement Condition **100 Total Possible Points** **Points?? For General Safety** • Improve lighting in selected urban locations. • Improve pedestrian signs and road markings. • Enhance intersection and roadway design to be more pedestrian friendly. • Implement an awareness campaign emphasizing the risks to pedestrians on roadways. • Increase pedestrian safety education programs in schools. • Increase targeted enforcement of drivers pertaining to crosswalk rules in urbanized areas and schools. • Expand use of speed monitoring and portable changeable message signs. • Enhance targeted corridor and selective traffic enforcement program efforts. • Educate roadway users on the dangers of aggressive driving and the rules of the road (i.e. driver's education). • Minimize impact to the motorist due to work zones. • Expand speed enforcement in work zones. • Increase the number of sobriety checkpoints.